HOLOPHANE
LEADER IN LIGHTING SOLUTIONS
An AcuityBrands Company

Media Group – Western Offices
· 570 Avenida Adobe ·
· San Clemente, CA · 92672-2402 ·
· (973) 209-4142 (Fax) 209-4482 ·
email: dbagni@holophane.com

December 19, 2002

Mr. William G. Pennington
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: 2005 Energy Efficiency Standards – Outdoor Lighting – Signs

Dear Mr. Pennington:

Holophane Corporation, an AcuityBrands Company has had a long history with, and presently has large interests in the Outdoor Advertising Industry. As an adjunct to the letter written you on November 15, 2002 by Cheryl English, VP of AcuityBrands Technical Marketing Services, I made a presentation during the Outdoor portion of the Agenda at the November 18, 2002 CEC hearing in Sacramento. This presentation was aimed specifically at the proposed LPD standards relating to Interior Illuminated Signage; (what the Industry calls "on-premise" Signs), and proposed a number of different lamp choices for Consideration by the Commission. In addition, the presentation pointed out what is currently standard practice for the lighting of single and double face on-premise interior illuminated signage.

Table #133-C, Section 133 on Page 81 of Workshop Draft #2 shows LPD values in all of the LZ's that are far too restrictive and far beyond the capabilities of current lighting technology to achieve. For example, Standard Lighting Practice for this type of sign (Flex Face or Rigid face) uses LPD's between 11w/ft² and 20w/ft² depending on *Lamp Saturation*, *the Graphic being displayed, and the size and shape of the Sign Cabinet.*

LAMP SATURATION:

A standard sign lighting practice has developed over many years that, when utilizing the fluorescent source, that the lamps be placed on 12" centers due to the requirement for Uniformity of Illuminance on the face of the graphic being viewed. Thus, there is a required *saturation* of lamps that, if not strictly applied, will result in dark and light spots on the message. This is the QUALITY aspect of Interior Illuminated Signage.

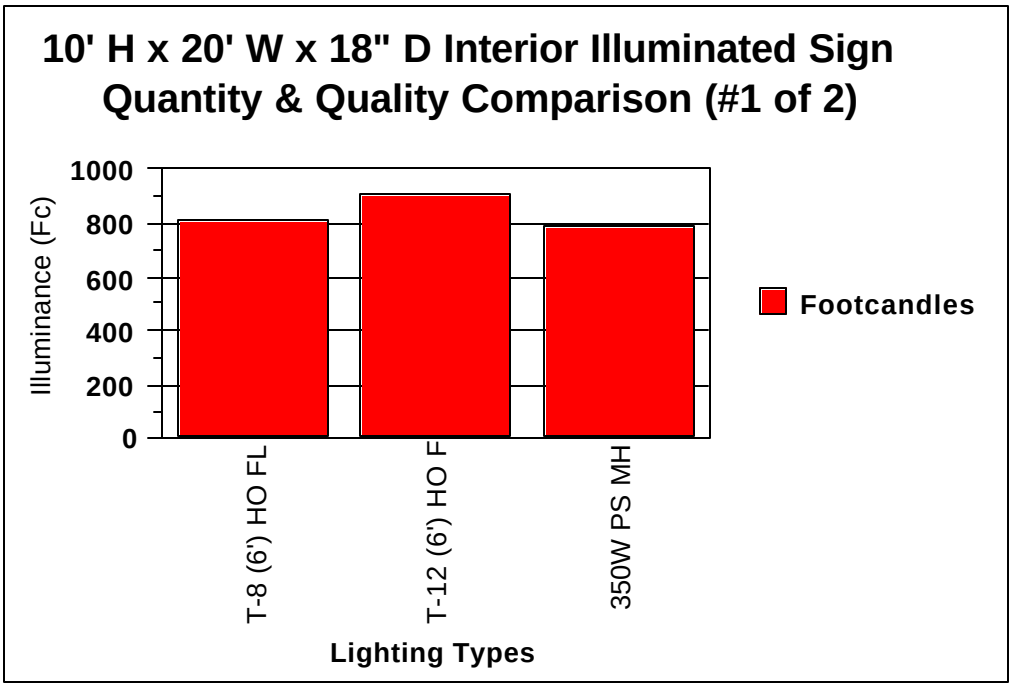
QUANTITY OF LIGHT:

Graphic designers and Advertising Agencies work together to produce artwork and corporate logo for signs that is easily read and understood by the viewer within a very short (12 seconds maximum) time period. The QUANTITY standard practice that has been developed is from 700 to 1,000 lumens per ft² (Footcandles) average on the back surface of the graphic. This range of lighting levels produces the accurate and true colors on the graphic that the industry expects. Lower light levels will change the hue of the colors as well as very high levels that are unacceptable to the advertiser.

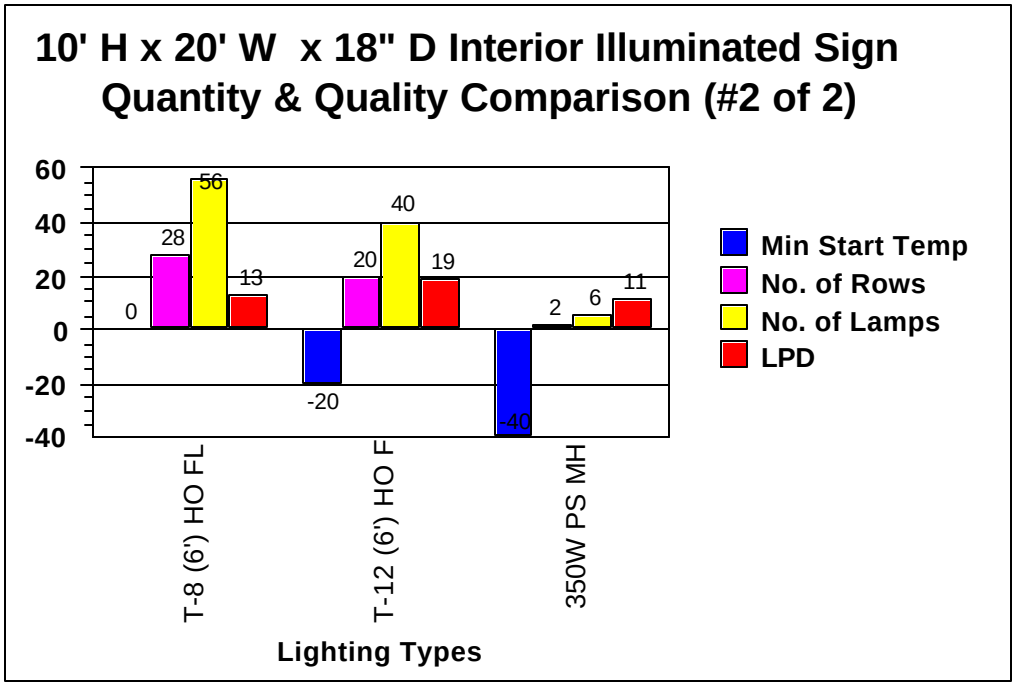
TECHNICAL MODELS:

During the presentation I stated that we were surprised that there had been no models shown to date in the drafts indicating that the proposed LPD's would be technically feasible. Jim Benya, one of the Commission's Contractors stated that on a sign measuring 10' H x 20' W, that 5' long T-8 HO lamps aligned vertically, end to end, coupled with electronic ballasts and placed on 14" centers would come c lose to the proposed LPD in LZ4. Industry practice indicates that there would be shadowing across the graphic, between lamps, as well as the gap between the sockets where the lamps are joined. Actual industry practice indicates that 6' lamps would be used on 12" centers and overlapped to avoid shadowing on the graphic face and provide enough illuminance to render the graphic colors as designed. (See Charts #1 and 2#). In addition, all fluorescent lamps, particularly the T-8, do not exhibit efficient performance in cold and very hot ambient temperatures and ultimately cost the consumer more to own and operate than HID.

There was some indication from Mr. Benya that he does not endorse the use of the HID lamp type called Metal Halide for Interior Illuminated Sign Applications. We wish to call your attention to a Pulse Start Metal Halide perimeter lighting solution for the Technical Model used. (See Charts #1 and #2)



(Chart #1 of 2)



(Chart #2 of 2)

Please note that the Metal Halide Perimeter Lighting System will provide:

- Superior Starting in Low Temperatures
- Many fewer lamps and supporting components
- Less Maintenance
- No reduction in output with low and high ambient temperatures
- 15-45% less energy consumed.

In summary, we strongly urge the Commission to carefully consider present state of the art in the lighting of signs and the available technology to provide a workable solution to more efficiently utilize available energy resources. We believe this can only be accomplished through the utilization of solid technical criteria approved by and coordinated with carefully chosen representatives of the Sign lighting industry, which doesn't seem to have been included in the EES Standards thus far.

Thank you for your careful consideration of these comments.

Sincerely,

Richard A. Bagni, MIESNA, LC
Director, Media Group West